EG&G ER Program
Rocky Flats Plant

(04/06/90)

ER PROGRAM DATA ASSESSMENT SUMMARY REPORT FORM

Batch No. 8907L171 **Site** 881 Hillside

Laboratory Roy F. Weston - Lionville **No. of Samples/Matrix** 11/Water

SOW # 10/86 (Rev. 2/88) **Reviewer Org.** TechLaw, Inc.

Sample Numbers G02870789002, GTB072689002 (AH8708), G04670789002, GS4870789002, G06870789002, GTB072589002, G59860789002, G48870789002, GTB072689002 (AH8713), H072689001, G53870789002

Data Assessment Summary

		VOA	Comments
1.	**Holding Times**	A	Action Item 1
2.	**GC/MS Tune/Instr. Perf.**	V	
3.	**Calibrations**	A	Action Items 2,3,4,5; Comment 1
4.	**Blanks**	A	Action Item 6; Comments 2,6
5.	**Surrogates**	A	Action Item 7
6.	**Matrix Spike/Dup.**	X	Comments 3,4
7.	**Other QC**	X	Comment 10
8.	**Internal Standards**	V	
9.	**Compound Identification**	X	Comments 5,8,11
10.	**System Performance**	X	Comments 7,9,12
11.	**Overall Assessment**	A	Data acceptable with qualifications.

V = Data had no problems.
A = Data acceptable but qualified due to problems.
R = Data rejected.
X = Problems, but do not affect data.

Data Quality: Data contained in this batch were reviewed and found to be acceptable with qualifications. Acceptable, qualified data may be used provided that individual values impacted by the "Action Items" listed below are appropriately flagged. (Refer to attached Results Summary Tables.)

Action Items: 1) Non-detected results for the aromatic compounds are estimated and undetected (UJ) in all samples except G02870789002, G04670789002, G06870789002 and the positive Toluene result in sample GS4870789002RE is estimated (J) because holding time exceeded seven days.

2) 2-Butanone and 4-Methyl-2-pentanone had Relative Response Factors (RRFs) less than 0.05 in all calibrations. Non-detected results are rejected (R) for all samples.

3) Acetone had a %RSD greater than 30% in the initial calibration and a %D exceeding 50% in the 8/4/89 continuing calibration. The positive Acetone result in G04670789002 is estimated (J) and all other positive Acetone results were qualified pursuant to method blank criteria. See Action Item 6.

4) The RRF50 for 2-Hexanone was less than 0.05 in the 8/7/89 continuing calibration. The non-detect 2-Hexanone results are rejected (R) for samples GTB072689002 (AH8708), GTB072689002 (AH8713), G59860789002, G59860789002RE, G48870789002, G48870789002RE, H072689001, G53870789002, and GS4870789002RE.

5) Tetrachloroethene exceeded the %D criteria in the 8/2/89 continuing calibration. The positive Tetrachloroethene result in sample G04670789002 is estimated (J).

6) As a result of blank contamination, the positive results for Acetone and Methylene Chloride in all samples except G04670789002 and the positive result for Carbon Disulfide in sample G02870789002 are estimated and undetected (UJ). The positive Methylene Chloride and Acetone results in sample G04670789002 exceeded the action limits (10x blank value) and the results are estimated (J) due to other QC problems.

7) No sample analyses had all surrogate recoveries within criteria. All results, except those previously rejected, are estimated (J) or estimated and undetected (UJ).

Comments: 1) Numerous compounds had %Ds greater than 25% in all continuing calibrations. Data was not qualified since these compounds were undetected in the affected samples.

2) Method blank VBLK138 was contaminated with Styrene and Xylenes (total). Data was not qualified since these compounds were undetected in the affected samples.

3) Matrix Spike and Matrix Spike Duplicate (MS/MSD) analyses were conducted using a trip blank which is not representative of sample matrix.

Comments: (cont) 4) Three compounds exceeded the %Recovery criteria in both the MS and MSD samples. Data was not qualified.

5) Tentatively Identified Compounds (TICs) were present in samples GTB072689002 (AH8708), G59860789002, G48870789002, H072689001, G53870789002, GTB072689002 (AH8713), G04670789002, and G06870789002.

6) The method blanks reported the presence of semivolatile target compounds (i.e.; Dichlorobenzene) as TICs. The solvent Hexane was also found in some of the blanks.

7) Many of the chromatograms for the samples and the calibrations had raised baselines within the approximate retention time of 1-5 minutes.

8) The laboratory did not report TICs present in the samples reanalyzed.

9) A peak within the approximate retention time of Chloromethane was present in all samples, but the laboratory did not identify it as either a TIC or a TCL.

10) Neither a field blank nor a field duplicate was performed with this batch of samples.

11) Two samples with the sample number GTB072689002 and two samples with the sample number GTB072689002RE were submitted in this batch. The samples were distinguished from each other on the Results Summary Tables by the Laboratory ID number.

12) Most samples were reanalyzed due to numerous QC problems. Both the reanalysis and the original sample result were reported on the Results Summary Table since both analyses of the samples had extensive QC problems.

Note: Data Summary Tables are attached.

Lisa Contreras-Hendler
Reviewer Signature

4-27-90
Date

TABLE #: 8907L171

SITE NAME: 881 Hillside

CLP VOLATILE ORGANIC ANALYSIS: Low Water

ANALYTICAL RESULTS (ppb)

Sample Location												
Sample Number		VBLK136	G02870789002	G04670789002	G06870789002	VBLK137	G02870789002RE	GS4870789002	G04670789002RE	G06870789002RE	GTB072589002	
Sampling Date			7/26/89	7/26/89	7/26/89		7/26/89	7/26/89	7/26/89	7/26/89	7/25/89	
Remarks		Method Blank				Method Blank	Reanalysis		Reanalysis	Reanalysis	Trip Blank	
Volatile Compound	CRQL ug/L (ppb)	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	
Chloromethane	10		10 UJ A	10 UJ A	10 UJ A		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	
Bromomethane	10		10 UJ A	10 UJ A	10 UJ A		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	
Vinyl chloride	10		10 UJ A	10 UJ A	10 UJ A		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	
Chloroethane	10		10 UJ A	10 UJ A	10 UJ A		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	
Methylene chloride	5	9 ppb	5 UJ A	130 J A	52 UJ A	8 ppb	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Acetone	10	11 ppb	20 UJ A	130 J A	37 UJ A	4 ppb	10 UJ A	10 UJ A	10 UJ A	20 UJ A	10 UJ A	
Carbon disulfide	5	2 ppb	5 UJ A	5 UJ A	5 UJ A		5 UJ A	1 J A	5 UJ A	5 UJ A	5 UJ A	
1,1-Dichloroethene	5		5 UJ A	2 J A	5 UJ A		5 UJ A	5 UJ A	1 J A	5 UJ A	5 UJ A	
1,1-Dichloroethane	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
1,2-Dichloroethene (Total)	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Chloroform	5		5 UJ A	8 J A	5 UJ A		5 UJ A	5 UJ A	5 J A	5 UJ A	5 UJ A	
1,2-Dichloroethane	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	2 J A	5 UJ A	5 UJ A	5 UJ A	
2-Butanone	10		10 U R	10 U R	10 U R		10 U R	10 U R	10 U R	10 U R	10 U R	
1,1,1-Trichloroethane	5		5 UJ A	7 J A	2 J A		5 UJ A	5 UJ A	4 J A	5 UJ A	5 UJ A	
Carbon tetrachloride	5		5 UJ A	36 J A	5 UJ A		5 UJ A	5 UJ A	29 J A	5 UJ A	5 UJ A	
Vinyl acetate	10		10 UJ A	10 UJ A	10 UJ A		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	
Bromodichloromethane	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
1,2-Dichloropropane	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
cis-1,3-Dichloropropene	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Trichloroethene	5		5 UJ A	180 J A	6 J A		5 UJ A	5 UJ A	180 J A	6 J A	5 UJ A	
Dibromochloromethane	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
1,1,2-Trichloroethane	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Benzene	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
trans-1,3-Dichloropropene	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Bromoform	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
4-Methyl-2-pentanone	10		10 U R	10 U R	10 U R		10 U R	10 U R	10 U R	10 U R	10 U R	
2-Hexanone	10		10 UJ A	10 UJ A	10 UJ A		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	
Tetrachloroethene	5		5 UJ A	9 J A	5 UJ A		5 UJ A	5 UJ A	10 J A	5 UJ A	5 UJ A	
1,1,2,2-Tetrachloroethane	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Toluene	5		5 UJ A	3 J A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Chlorobenzene	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Ethylbenzene	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Styrene	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Xylenes (Total)	5		5 UJ A	5 UJ A	5 UJ A		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	
Total Organic Concentration (ppb)		22	0	505	8	12	0	3	229	6	0	

U Indicates the compound was not detected above the Required Quantitation Limit.

J Quantitation is approximate due to limitations identified during the quality control review.

E Exceeds calibration range, dilute & reanalyze.

CRQL Contract Required Quantitation Limit in Micrograms per Liter (ug/L), Parts per billion (ppb).

DQ Data Qualifier

V Valid

A Acceptable with qualifications

R Rejected

TABLE #: 8907L171

SITE NAME: 881 Hillside

CLP VOLATILE ORGANIC ANALYSIS: Low Water

ANALYTICAL RESULTS (ppb)

Sample Location								AH8708	AH8713		
Sample Number		VBLK138	GS4870789002RE	G59860789002	G59860789002RE	G48870789002	G48870789002RE	GTB072689002	GTB072689002	H072689001	G53870789002
Sampling Date			7/26/89	7/25/89	7/25/89	7/25/89	7/25/89	7/26/89	7/26/89	7/26/89	7/26/89
Remarks		Method Blank	Reanalysis		Reanalysis		Reanalysis	Trip Blank	Trip Blank		
Volatile Compound	CRQL ug/L (ppb)	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Chloromethane	10		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A
Bromomethane	10		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A
Vinyl chloride	10		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A
Chloroethane	10		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A
Methylene chloride	5	7 ppb	11 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Acetone	10	6 ppb	15 UJ A	14 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A
Carbon disulfide	5		8 J A	2 J A	1 J A	1 J A	1 J A	2 J A	2 J A	1 J A	1 J A
1,1-Dichloroethene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
1,1-Dichloroethane	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
1,2-Dichloroethene (Total)	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Chloroform	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
1,2-Dichloroethane	5		3 J A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
2-Butanone	10		10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R
1,1,1-Trichloroethane	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Carbon tetrachloride	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Vinyl acetate	10		10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A	10 UJ A
Bromodichloromethane	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
1,2-Dichloropropane	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
cis-1,3-Dichloropropene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Trichloroethene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Dibromochloromethane	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
1,1,2-Trichloroethane	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Benzene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
trans-1,3-Dichloropropene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Bromoform	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
4-Methyl-2-pentanone	10		10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R
2-Hexanone	10		10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R	10 U R
Tetrachloroethene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
1,1,2,2-Tetrachloroethane	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Toluene	5		1 J A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Chlorobenzene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Ethylbenzene	5		5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Styrene	5	1 ppb	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Xylenes (Total)	5	2 ppb	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A	5 UJ A
Total Organic Concentration (ppb)		16	12	2	1	1	1	2	2	1	1

U Indicates the compound was not detected above the Required Quantitation Limit.

J Quantitation is approximate due to limitations identified during the quality control review.

E Exceeds calibration range, dilute & reanalyze.

CRQL Contract Required Quantitation Limit in Micrograms per Liter (ug/L), Parts per billion (ppb).

DQ Data Qualifier

V Valid

A Acceptable with qualifications

R Rejected

TABLE #: 8907L171

SITE NAME: 881 Hillside

CLP VOLATILE ORGANIC ANALYSIS: Low Water

ANALYTICAL RESULTS (ppb)

Sample Location					AH8806	AH8807					
Sample Number		VBLK139	H072689001RE		G53870789002RE	GTB072689002RE	GTB072689002RE				
Sampling Date			7/26/89		7/26/89	7/26/89	7/26/89				
Remarks		Method Blank	Reanalysis		Reanalysis	Reanalysis	Reanalysis				
Volatile Compound	CRQL ug/L (ppb)	DQ		DQ		DQ		DQ				
Chloromethane	10		10	UJ A	10	UJ A	10	UJ A	10	UJ A					
Bromomethane	10		10	UJ A	10	UJ A	10	UJ A	10	UJ A					
Vinyl chloride	10		10	UJ A	10	UJ A	10	UJ A	10	UJ A					
Chloroethane	10		10	UJ A	10	UJ A	10	UJ A	10	UJ A					
Methylene chloride	5	8 ppb	5	UJ A	5	UJ A	9	UJ A	6	UJ A					
Acetone	10	10 ppb	10	UJ A	10	UJ A	13	UJ A	10	UJ A					
Carbon disulfide	5		1	J A	1	J A	3	J A	2	J A					
1,1-Dichloroethene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
1,1-Dichloroethane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
1,2-Dichloroethene (Total)	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Chloroform	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
1,2-Dichloroethane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
2-Butanone	10		10	U R	10	U R	10	U R	10	U R					
1,1,1-Trichloroethane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Carbon tetrachloride	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Vinyl acetate	10		10	UJ A	10	UJ A	10	UJ A	10	UJ A					
Bromodichloromethane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
1,2-Dichloropropane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
cis-1,3-Dichloropropene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Trichloroethene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Dibromochloromethane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
1,1,2-Trichloroethane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Benzene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
trans-1,3-Dichloropropene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Bromoform	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
4-Methyl-2-pentanone	10		10	U R	10	U R	10	U R	10	U R					
2-Hexanone	10		10	UJ A	10	UJ A	10	UJ A	10	UJ A					
Tetrachloroethene	5		5	UJ A	1	J A	5	UJ A	5	UJ A					
1,1,2,2-Tetrachloroethane	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Toluene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Chlorobenzene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Ethylbenzene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Styrene	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Xylenes (Total)	5		5	UJ A	5	UJ A	5	UJ A	5	UJ A					
Total Organic Concentration (ppb)		18	1		2		3		2						

U Indicates the compound was not detected above the Required Quantitation Limit.

J Quantitation is approximate due to limitations identified during the quality control review.

E Exceeds calibration range, dilute & reanalyze.

CRQL Contract Required Quantitation Limit in Micrograms per Liter (ug/L), Parts per billion (ppb).

DQ Data Qualifier

V Valid

A Acceptable with qualifications

R Rejected